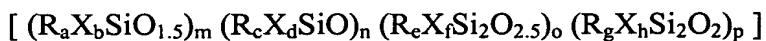


IN THE CLAIMS

Please amend the claims as follows:

Claim 1-28 (Canceled).

Claim 29 (New): A matrix which has been crosslinked by means of at least one crosslinker which comprises functionalized polyhedral oligomeric silicon-oxygen cluster units of the formula



with  $a,b,c = 0-1$ ;  $d = 1-2$ ;  $e,f,g = 0-3$ ;  $h = 1-4$ ;  $m+n+o+p \geq 4$ ;  $a+b = 1$ ,  $c+d = 2$ ;  $e+f = 3$  and  $g+h = 4$ ;

$R$  = hydrogen atom, alkyl, cycloalkyl, alkenyl, cyclo-alkenyl, alkynyl, cycloalkynyl, aryl, heteroaryl group or polymer unit, which are in each case substituted or unsubstituted or further functionalized polyhedral oligomeric silicon-oxygen cluster units, which are attached by way of a polymer unit or a bridging unit,

$X$  = oxy, hydroxyl, alkoxy, carboxyl, silyl, alkyl-silyl, alkoxy-silyl, siloxy, alkylsiloxy, alkoxy-siloxy, silylalkyl, alkoxy-silylalkyl, alkylsilyl alkyl, halogen, epoxy, ester, fluoroalkyl, isocyanate, blocked isocyanate, acrylate, methacrylate, nitrile, amino, phosphine group or substituents of the type  $R$  comprising at least one such group of the type  $X$ ,

the substituents of the type  $R$  being identical or different and the substituents of the type  $X$  being identical or different and at least two of the substituents being of type  $X$ .

Claim 30 (New): The matrix as claimed in claim 29, wherein the crosslinker comprises functionalized polyhedral oligomeric silicon-oxygen cluster units, at least one of the substituents of type  $X$  comprising an isocyanate, blocked isocyanate, amino, acrylate, methacrylate, alkoxy-silyl, alkoxy-silylalkyl, hydroxyl or epoxy group.

Claim 31 (New): The matrix as claimed in claim 29, wherein the crosslinker comprises functionalized polyhedral oligomeric silicon-oxygen cluster units, at least two of the substituents of type X are identical.

Claim 32 (New): The matrix as claimed in claim 29, which has been crosslinked by means of a combination of different crosslinkers.

Claim 33 (New): The matrix as claimed in claim 29, which comprises an organic and/or inorganic matrix material.

Claim 34 (New): The matrix as claimed in claim 29, which comprises as inorganic matrix material glasses, mineral building materials and/or inorganic sinter compositions.

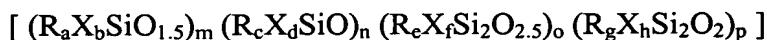
Claim 35 (New): The matrix as claimed in claim 29, which comprises as organic matrix material an elastomer or a thermoplastic or thermoset.

Claim 36 (New): The matrix as claimed in claim 35, wherein the organic matrix material is a plastic selected from the group consisting of polyethylene, polypropylene, polyester, copolyester, polycarbonate, polyamide, copolyamide, polyurethane, polyacrylate, polymethacrylate, polymethacrylate copolymer, polysiloxane, polysilane, polytetrafluoroethylene, phenolic resin, polyoxymethylene, epoxy resin, polyvinyl chloride, vinyl chloride copolymer, polystyrene, styrene copolymer, ABS polymer, alkyd resin, unsaturated polyester resin, nitrocellulose resin, rubber and mixtures thereof.

**Claim 37 (New):** The matrix as claimed in claim 29, wherein the silasesquioxane unit of the crosslinker forms at least one covalent bond to the matrix material.

**Claim 38 (New):** The matrix as claimed in claim 29, wherein the matrix material comprises from 0.1 to 50% by weight of the crosslinker.

**Claim 39 (New):** A method of crosslinking matrix materials to form a solid matrix, which comprises using a crosslinker which comprises functionalized polyhedral oligomeric silicon-oxygen cluster units of the formula



with a,b,c = 0-1; d = 1-2; e,f,g = 0-3; h = 1-4; m+n+o+p ≥ 4; a+b = 1, c+d = 2; e+f = 3

and g+h = 4;

R = hydrogen atom, alkyl, cycloalkyl, alkenyl, cyclo-alkenyl, alkynyl, cycloalkynyl, aryl, heteroaryl group or polymer unit, which are in each case substituted or unsubstituted or further functionalized polyhedral oligomeric silicon-oxygen cluster units, which are attached by way of a polymer unit or a bridging unit,

X = oxy, hydroxyl, alkoxy, carboxyl, silyl, alkyl-silyl, alkoxy-silyl, siloxy, alkylsiloxy, alkoxy-siloxy, silylalkyl, alkoxy-silylalkyl, alkylsilyl alkyl, halogen, epoxy, ester, fluoroalkyl, isocyanate, blocked isocyanate, acrylate, methacrylate, nitrile, amino, phosphine group or substituents of the type R comprising at least one such group of the type X,

the substituents of the type R being identical or different and the substituents of the type X being identical or different and at least two of the substituents being of type X.

**Claim 40 (New):** The method as claimed in claim 39, wherein the crosslinker comprises functionalized polyhedral oligomeric silicon-oxygen cluster units, at least one of

the substituents of type X comprising an isocyanate, blocked isocyanate, amino, acrylate, methacrylate, alkoxy silyl, alkoxy silyl alkyl, hydroxyl or epoxy group.

Claim 41 (New): The method as claimed in claim 39, wherein the crosslinker comprises functionalized polyhedral oligomeric silicon-oxygen cluster units, at least two of the substituents of type X are identical.